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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,212	01/20/2006	Gyu Ho Oh	HI-0265	9160
34610 7590 07/13/2007 KED & ASSOCIATES, LLP P.O. Box 221200 Chantilly, VA 20153-1200			EXAMINER LEUNG, PHILIP H	
			ART UNIT 3742	PAPER NUMBER
			MAIL DATE 07/13/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/565,212

Applicant(s)

OH ET AL.

Examiner

Philip H. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1-20-2006</u> .   | 6) <input type="checkbox"/> Other: ____                           |

### DETAILED ACTION

1. The drawings filed 1-20-2006 are acceptable.
2. The 1-20-2006 IDS has been considered. However, it is noted that document "US 6411664" appears to have been misnumbered (should it be "US 6114664" instead?) and the copy of the two foreign patent documents is not available, therefore these three documents have not been considered and deleted from the listing. If the applicants wish to have these documents considered, the same must be relisted on a supplemental IDS with correct number and/or copies.
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The use of microwave heating should be reflected in the title.
4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitations "at a front and upper surface of the microwave oven" and "at a front and upper surface of the microwave oven" in claims 1 and 11 and other similar limitation "of the microwave oven" in claims 3, 13, 15, 18, 20, 23, 25 and 29 are vague and indefinite. At the outset, the term "the microwave oven" has no proper antecedent basis. Most importantly, all

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the claimed elements are parts of the oven, therefore, using the overall assembly as a reference for the claimed positional and structural relationship is therefore not clear. Further, the term “the lower barrier” in claims 27-28 has no proper antecedent basis in claim 25. Clarification and correction are required.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 11-16, 18 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al (US 6,344,637) (cited by the applicant).

Lee shows an air flow system in oven, the structure comprising: a cavity 2 for housing food; an electronic equipment chamber 40 in which a plurality of electronic equipments is provided to control the cavity; an outer case (formed of walls 1a, 1b, 1c and 1d) encompassing the cavity and the electronic equipment chamber to form an exterior; a door 30 for selectively opening and closing a front of the cavity; a first intake port 10 provided at an upper side of the door, for allowing the introduction of air; a front outlet port 20 provided at a front and lower side of the microwave oven such that the introduced air is exhausted to a front of the microwave oven; a ventilation fan assembly 22, 24, 26 and 28 provided at the electronic equipment chamber, for inhaling air through the intake port and exhausting the air through the outlet port (see Figures 1-8 and col. 4, line 1 – col. 7, line 21). In regard to claim 18, Lee includes a control panel 4. In

regard to claim 25, the limitation “and/or” only requires one of two alternatives.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-10, 17, 19-24 and 26-29 are rejected under 35 U.S.C. 103(a) as being obvious over Lee et al (US 6,344,637), in view of Kim et al (US 6,621,058).

Lee shows an air flow system in oven, the structure comprising: a cavity 2 for housing food; an electronic equipment chamber 40 in which a plurality of electronic equipments is provided to control the cavity; an outer case (formed of walls 1a, 1b, 1c and 1d) encompassing the cavity and the electronic equipment chamber to form an exterior; a door 30 for selectively opening and closing a front of the cavity; a first intake port 10 provided at an upper side of the door, for allowing the introduction of air; a front outlet port 20 provided at a front and lower side of the microwave oven such that the introduced air is exhausted to a front of the microwave oven; a ventilation fan assembly 22, 24, 26 and 28 provided at the electronic equipment chamber, for inhaling air through the intake port and exhausting the air through the outlet port (see Figures 1-8 and col. 4, line 1 – col. 7, line 21). Therefore it shows every feature as claimed except for the use of a lower barrier for partitioning a lower space of the cavity. Kim shows an air flow system in oven, the structure comprising: a cavity 11 for housing food; an electronic equipment chamber 12 in which a plurality of electronic equipments 18, 19 is provided to control the cavity; an outer

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case 10 encompassing the cavity and the electronic equipment chamber to form an exterior; a door 16 for selectively opening and closing a front of the cavity; a first intake port 32 provided adjacent an upper side of the door, for allowing the introduction of air; a front outlet port 30 provided at a front and lower side of the microwave oven such that the introduced air is exhausted to a front of the microwave oven; a ventilation fan assembly 13 and 31 provided at the electronic equipment chamber, for inhaling air through the intake port and exhausting the air through the outlet port an upper blowout port for blowing out the hot air stream formed in a ceiling wall of the cooking chamber. Kim further shows the use of a plate 38 locating at the lower part of the oven to form a lower barrier as an air guide (see Figures 2-6 and col. Col. 3, line 11 – col. 5, line 21). It would have been obvious to an ordinary skill in the art at the time of invention to modify Lee to use a lower barrier at the lower part of the microwave oven to form an air guide for directing airflow along the bottom of the oven for better cooling effect and better cooking result, in view of the teaching of Kim. The exact locations of the outlet and intake ports, and the air guide part would be a matter of engineering expediencies depending on the overall arrangement of the oven chamber.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (571) 272-4782.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Philip H Leung  
Primary Examiner  
Art Unit 3742

P.Leung/pl  
7-6-2007